

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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| In the Matter of |) | |
| |) | |
| Inquiry Concerning Deployment of Advanced |) | GN Docket No. 19-285 |
| Telecommunications Capability to All |) | |
| Americans in a Reasonable and Timely Fashion |) | |

COMMENTS OF VIASAT, INC.

Viasat, Inc. (“Viasat”) submits these comments in response to the Notice of Inquiry (“NOI”) released on October 23, 2019 in the above-captioned proceeding.¹

INTRODUCTION AND SUMMARY

As a leading provider of communications solutions to consumers, businesses, and government users across an array of technologies (both satellite and terrestrial), Viasat has particular insight into the NOI’s inquiry into “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.”² Viasat continues to be at the forefront of efforts to expand the availability of advanced telecommunications capability throughout the United States. Viasat has pioneered major advances in the provision of satellite broadband services, including groundbreaking capabilities that substantially reduce the “cost per bit” of delivering broadband service. These innovations have enabled Viasat to provide high-speed, cost-effective broadband connections that are comparable to what consumers have come to expect for terrestrial broadband services—thus positioning Viasat as an industry leader in

¹ See *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 19-285, Notice of Inquiry, FCC 19-102 (rel. Oct. 23, 2019) (“NOI”).

² *Id.* ¶ 3 (quoting 47 U.S.C. § 1302(b)).

expanding access to broadband to millions of Americans, including in rural and “high-cost” areas, and as an effective competitive alternative to wired and wireless terrestrial services.

Viasat’s efforts to revolutionize the satellite industry continue at a steady pace. In 2017, the company launched ViaSat-2, which provides approximately 260 Gbps of capacity and supports peak speeds of 100 Mbps and higher. ViaSat-2 already represented a significant leap forward from ViaSat-1, which itself had more than 14 times the throughput (140 Gbps) of any other Ka-band satellite in orbit at the time it commenced operations in 2012. And the ViaSat-3 constellation—a trio of satellites, the first of which is planned for launch in 2021—represents yet another major advance in broadband satellite capabilities. Each ViaSat-3 satellite is expected to provide more than 1 *terabit* per second of total network capacity, and through its ability to dynamically direct capacity to where customers and demand are located, the satellite will be able to extend capacity and coverage where and when it is most needed.³

The NOI asks important questions on how to ensure that innovative services like these can continue to expand the availability of advanced telecommunications capability across the country. As discussed below, the Commission should (1) pursue universal service policies that acknowledge satellite providers’ key role in closing the digital divide, (2) recognize the continued importance that spectrum access plays in advancing deployment, and (3) ensure that the Commission appropriately evaluates and presents satellite deployment data when measuring the progress made towards these goals.

³ See Viasat, Inc., “Going Global: ViaSat-3 Platform Will Take Our Service Around the World,” available at <https://www.viasat.com/news/going-global>.

DISCUSSION

I. SATELLITE BROADBAND IS CRITICAL TO CLOSING THE DIGITAL DIVIDE AND MEETING THE COMMISSION’S UNIVERSAL SERVICE GOALS

The NOI seeks comment on “the effectiveness of USF funding in driving the deployment of advanced telecommunications capability,” and asks whether “the Commission [has] been effective in its efforts to increase deployment by targeting USF funding to unserved areas in order to extend the reach of networks to all Americans[.]”⁴

Viasat is proud to have been a major contributor to the success of last year’s Connect America Fund (“CAF”) Phase II auction and a significant force in driving down the cost of support in areas across the country and extending new broadband offerings to over 190,000 locations. The Commission laudably agreed to allow satellite broadband providers to participate in that auction,⁵ albeit subject to a 25-point latency penalty.⁶ As Viasat has demonstrated, its participation in that auction played a critical role in expanding cost-effective service offerings that meet Commission quality standards while tempering others’ bids.⁷ Indeed, Viasat was *the only bidder* in many areas where it provisionally won support in the CAF Phase II auction—meaning that those areas otherwise likely would have continued to have been left behind in terms

⁴ NOI ¶ 26.

⁵ See *Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 5949 ¶ 30 (2016) (establishing separate bidding tier enabling geostationary orbit satellite providers to participate in CAF Phase II auction).

⁶ See *Connect America Fund*, Public Notice, 33 FCC Rcd 1428 ¶ 12 (2018) (applying 25-point weight to bids with a maximum roundtrip latency equal to or less than 750 ms).

⁷ See, e.g., Comments of Viasat, Inc., WC Docket Nos. 19-126 & 10-90, at 6-12 (filed Sep. 20, 2019) (“Viasat RDOF Comments”); see also Dr. Paul Milgrom and Dr. Ilya Segal, “Lessons from the CAF II Auction for the RDOF Auction,” at 2 (Sept. 20, 2019), attached as Exhibit A to Viasat RDOF Comments (“Milgrom/Auctionomics Sept. 20 Paper”).

of CAF-supported services, and underscoring the essential role of satellite broadband services in bridging the digital divide in this country.⁸

In light of the above, the Commission should be seeking to *expand* opportunities for satellite providers to participate in future broadband support mechanisms. Regrettably, however, the Commission’s current proposal for its new \$20.4 billion Rural Digital Opportunity Fund (“RDOF”) would do the opposite—by, among other things, significantly increasing the latency-related penalty from 25 points to 40 points, as possibly higher.⁹ As Viasat has explained at length in that proceeding, and as an analysis by Dr. Paul Milgrom and his team at Auctionomics confirms, this proposal would effectively preclude meaningful participation by geostationary orbit satellite providers and seriously undermine the Commission’s goals of expanding broadband access, stoking competition, and driving down support costs.¹⁰ Viasat is committed to working with the Commission to revise its proposed RDOF framework to ensure the continued “effectiveness of USF funding in driving the deployment of advanced telecommunications capability.”¹¹

II. THE COMMISSION SHOULD PROMOTE INNOVATIVE SATELLITE BROADBAND SERVICES BY EXPANDING SPECTRUM ACCESS

The NOI also seeks comment on “[w]hat more [the Commission] could or should . . . do to expand access to spectrum to support or supplement wireless and satellite broadband

⁸ See Viasat RDOF Comments at 6-8.

⁹ See *Rural Digital Opportunity Fund; Connect America Fund*, WC Docket Nos. 19-126 & 10-90, Notice of Proposed Rulemaking, FCC 19-77, ¶ 25 (rel. Aug. 2, 2019)

¹⁰ See Viasat RDOF Comments at 4, 6-12; Milgrom/Auctionomics Sept. 20 Paper at 2-4.

¹¹ NOI ¶ 26.

services.”¹² As Viasat explained in response to last year’s *Fourteenth Broadband Deployment Notice of Inquiry*, expanding such access is critically important to ensuring that satellite broadband providers have sufficient spectrum to offer innovative services that meet consumer demand.¹³ Like terrestrial wireless networks, satellite broadband networks benefit from expanded spectrum access not only to serve additional customers but also to provide higher speeds and greater throughput. Spectrum access naturally will continue to be important as new satellite broadband networks—such as the groundbreaking ViaSat-3 network noted above—are launched and brought into service, enabling vast increases in speed and capacity to consumers throughout the country.

In this vein, one area of particular focus recently has been the regulatory framework governing earth stations in motion (“ESIMs”). Viasat applauds the Commission’s recent actions aimed at facilitating the deployment of ESIMs, as well as the actions of the international community this week at WRC-19, which will enable satellite operators to meet the growing consumer demands for satellite broadband services while on the move. Viasat’s fleet of satellites operating in the Ka band deliver high-performance Wi-Fi connectivity on airplanes, giving consumers robust in-flight access to the Internet and supporting a variety of applications, including video streaming. Today, Viasat supports over 150 million connections on airplanes annually, and that number continues to grow as satellite-powered Wi-Fi expands to more aircraft and as consumers increasingly rely on such services for gate-to-gate connectivity. In light of these other innovative and vital service offerings, Commission should continue to ensure that

¹² *Id.*

¹³ See Comments of Viasat, Inc., GN Docket No. 18-238, at 3-4 (filed Sept. 10, 2018) (“Viasat 2018 Section 706 Comments”).

satellite providers can offer a wide range of satellite services anywhere within a satellite's coverage area and without unreasonable limitations.

III. SATELLITE DEPLOYMENT DATA SHOULD BE EVALUATED IN THE SAME MANNER AS TERRESTRIAL DEPLOYMENT DATA

Finally, the Commission should reconsider the proposal in the NOI to evaluate and present satellite deployment data differently from terrestrial deployment data, as it has done in prior reports. Specifically, the NOI proposes “to present deployment estimates for satellite broadband as we did in the 2019 Report, providing deployment estimates for fixed terrestrial services in the report’s tables and providing deployment estimates for all fixed services, including satellite, separately in an appendix.”¹⁴ The NOI goes on to assert that “while satellite signal coverage may enable operators to offer services to wide swaths of the country, overall satellite capacity may limit both the speed of service and the number of consumers that can actually subscribe to satellite service at any one time.”¹⁵ The NOI “seek[s] comment on this treatment of satellite service, including how we should take into account any possible limitations, such as satellite capacity, in assessing the geographic scope of reported satellite coverage.”¹⁶

To begin with, as Viasat has explained previously, an approach that separates satellite deployment data from other technologies in evaluating broadband deployment and relegates satellite data to an appendix gives the unfortunate impression that satellite deployment is somehow inconsequential and immaterial to the Commission’s analysis under Section 706.¹⁷ Presenting satellite broadband deployment data together with terrestrial deployment data in the

¹⁴ NOI ¶ 19.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ Viasat 2018 Section 706 Comments at 5.

body of the report would properly reflect the reality that satellite broadband is an effective competitive alternative to terrestrial services, and would better comport with principles of technological and competitive neutrality.

Moreover, the notion that satellite broadband deployment should be viewed differently because of “capacity” constraints is a non sequitur. Capacity constraints are not unique to satellite networks; all networks, irrespective of technology, are limited in their ability to serve all potential users in their footprints simultaneously. As Viasat has previously explained, satellite networks, like terrestrial networks, “scale over time to serve a growing customer base through investments that conceptually are no different than those needed to scale terrestrial networks.”¹⁸ Indeed, as noted above, advances in satellite broadband technology are enhancing satellite providers’ ability to reallocate capacity to meet increased demand in specific areas. And Viasat is able to bypass congestion issues that often plague terrestrial networks “by delivering traffic directly from the end user to the satellite and from the satellite to an earth station that efficiently connects directly to the rest of the Internet via high-quality fiber, and *vice versa*.”¹⁹ Viasat thus respectfully submits that “capacity” considerations do not support separating satellite broadband deployment data from terrestrial deployment data in the Commission’s annual Section 706 reports.

¹⁸ *Id.* at 6.

¹⁹ *Id.* at 7.

CONCLUSION

Viasat appreciates the Commission's ongoing efforts to evaluate the deployment and availability of advanced telecommunications capability accurately and effectively, and submits that the considerations noted above will aid the Commission in this task.

Respectfully submitted,

/s/

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